

**REQUEST FOR PARTICIPATION IN THE PATENT PROSECUTION HIGHWAY (PPH) PROGRAM BETWEEN THE JPO AND THE USPTO**

Application No.:	10/567,971	First Named Inventor:	KAZUNARI IDE
Filing Date:	October 20, 2006	Attorney Docket No.:	OLI-007
Title of the Invention:	BLADE-PITCH-ANGLE CONTROL DEVICE AND WIND POWER GENERATOR		

THIS REQUEST FOR PARTICIPATION IN THE PPH PROGRAM ALONG WITH THE REQUIRED DOCUMENTS MUST BE SUBMITTED VIA EFS-Web. INFORMATION REGARDING EFS-Web IS AVAILABLE AT [HTTP://WWW.USPTO.GOV/EFW/EFW\\_HELP.HTML](http://www.uspto.gov/efw/efs_help.html).

**APPLICANT HEREBY REQUESTS PARTICIPATION IN THE PATENT PROSECUTION HIGHWAY (PPH) PROGRAM AND PETITIONS TO MAKE THE ABOVE-IDENTIFIED APPLICATION SPECIAL UNDER THE PPH PROGRAM.**

The above-identified application (1) validly claims priority under 35 U.S.C. 119(a) and 37 CFR 1.55 to one or more corresponding JPO application(s) or to a PCT application that does not contain any priority claim, or (2) is a national stage entry of a PCT application that does not contain any priority claim.

The JPO/PCT application number(s) is/are: 2003-318312

The filing date of the JPO/PCT application(s) is/are: September 10, 2003

**I. List of Required Documents:**

- a. A copy of the latest JPO office actions (other than "Decision to Grant a Patent") in the above-identified JPO application(s)

☐ Is attached.

☒ Is available via Dossier Access System. Applicant hereby requests that the USPTO obtain these documents via the Dossier Access System.

\*It is not necessary to submit a copy of the "Decision to Grant a Patent" and an English translation thereof.

- b. A copy of all claims which were determined to be patentable by the JPO in the above-identified JPO application(s)

☒ Is attached.

☐ Is available via Dossier Access System. Applicant hereby requests that the USPTO obtain these documents via the Dossier Access System.

- c. English translations of the documents in a. and b. above along with a statement that the English translations are accurate are attached (if the documents are not in the English language).

- d. (1) An information disclosure statement listing the documents cited in the JPO office actions

☐ Is attached.

☐ Has already been filed in the above-identified U.S. application on \_\_\_\_\_

- (2) Copies of all documents (except for U.S. patents or U.S. patent application publications)

☐ Are attached.

☐ Have already been filed in the above-identified U.S. application on \_\_\_\_\_

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 119, 37 CFR 1.55, and 37 CFR 1.102(d). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.

## (continued)

First Named Inventor: KAZUNARI IDE

[illegible]

The petition fee under 37 CFR 1.17(h) as required by 37 CFR 1.102(d) must be paid via EFS-Web (using credit card, authorization to charge a deposit account, or electronic funds transfer).

Registration Number 37,093

## Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:	
Kazunari IDE et al.	:	Confirmation No. 5599
	:	
U.S. Patent Application No.: 10/567,971	:	Group Art Unit: 3745
	:	
Filed: October 20, 2006	:	

For: BLADE-PITCH-ANGLE CONTROL DEVICE AND WIND POWER GENERATOR

**SUBMISSION OF REQUEST FOR PARTICIPATION IN THE PPH PROGRAM**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In connection with the above-referenced application, it is respectfully requested that the Request for Participation in the PPH Program be entered.

In the present application, initially, two Japanese priorities, No. 2003-318312 (corresponding US claims are claims 1-5), filed on September 10, 2003 and No. 2004-143642 (corresponding US claims are claims 6-10), filed on September 9, 2004, were claimed. Japanese patent application No. 2003-318312 was granted without rejections on December 4, 2007, and Japanese patent application No. 2004-143642 was withdrawn because the applicant did not make a request for the examination within three years of the filing of the application.

No reference has been cited in the prosecution of Japanese patent application No. 2003-318312. Therefore, no IDS is filed for the purpose of the participation in the PPH Program.

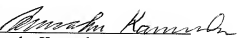
In the preliminary amendment, claims 6-10 have been canceled to be consistent with the allowed claims in Japanese patent application No. 2003-318312.

Please retrieve any JPO office actions via Dossier Access System.

A copy of claims which were determined to be patentable by the JPO is attached with English translations of such claims, and a statement that the English translations are accurate.

Pursuant to 37 CFR 1.17(h), the commissioner is hereby authorized to charge the petition fee in the amount of \$130.00 to make special based on the PPH program through EFS-WEB.

Respectfully Submitted,

By   
Manabu Kanesaka  
Reg. No. 31,467  
Agent for Applicants

1700 Diagonal Road, Suite 310  
Alexandria, VA 22314  
(703) 519-9785

【書類名】特許請求の範囲

【請求項1】

複数枚のブレードを有する風力発電装置に用いられるブレードピッチ角度制御装置であつて、

前記ブレードの荷重変動に影響を及ぼす所定のパラメータ、アジマス角度、及びピッチ角度指令値が互いに関連付けられて格納されている記憶手段と、

前記ブレード毎のアジマス角度を検出するアジマス角度検出手段と、

前記所定のパラメータを検出するパラメータ検出手段と、

前記アジマス角度検出手段によって検出された前記ブレード毎のアジマス角度と前記パラメータ検出手段によって検出された所定のパラメータとによって選定されるピッチ角度指令値を前記ブレード毎にそれぞれ前記記憶手段から取得する指令値取得手段と、

前記指令値取得手段によって取得された前記ピッチ角度指令値と前記風力発電装置の出力情報により求められる各ブレード共通の共通ピッチ角度指令値とに基づいて、前記ブレードのピッチ角度を個別に制御するためのピッチ角度制御指令値を生成するピッチ角度制御指令値生成手段と

を具備することを特徴とするブレードピッチ角度制御装置。

【請求項2】

前記記憶手段に格納されている前記ピッチ角度指令値は、前記風力発電装置の設置場所におけるウィンドシア特性が反映された値に設定されていることを特徴とする請求項1に記載のブレードピッチ角度制御装置。

【請求項3】

前記所定のパラメータは風速であり、

前記パラメータ検出手段は、風速と前記風力発電装置の出力とが関連付けられている特性テーブルを有し、前記風力発電装置の出力に対応する風速を前記特性テーブルから読み出すことにより、風速を推定する風速推定手段であることを特徴とする請求項1から請求項3のいずれかの項に記載のブレードピッチ角度制御装置。

【請求項4】

前記風力発電装置の発電出力、発電機回転数、又はロータ回転数のいずれかからブレード数の整数倍の周波数成分を抽出する周波数成分抽出手段と、

抽出した該周波数成分に基づいて、その周波数変動による荷重変動を除去するためのピッチ角度を演算する演算手段と

を更に備え、

前記ピッチ角度制御指令値生成手段は、前記演算手段によって演算されたピッチ角度を前記ピッチ角度制御指令値に反映させる

ことを特徴とする請求項1から請求項3のいずれかの項に記載のブレードピッチ角度制御装置。

【請求項5】

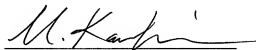
請求項1から請求項4のいずれかの項に記載のブレードピッチ角度制御装置を備えた風力発電装置。

## DECLARATION

I, Miki Kawakami, of OLIVE INTERNATIONAL PATENT OFFICE, 3-3-1, Minatomirai, Nishi-ku, Yokohama 220-0012, Japan, understand both English and Japanese, am a Japanese Patent Attorney and the translator of the English document attached, and do hereby declare and state that the attached English document contains an accurate translation of granted claims 1 to 5 of Japanese patent application No. 2003-318312 and that all statements made herein are true to the best of my knowledge.

Declared in Yokohama, Japan

This 30th day of April, 2008

A handwritten signature in black ink, appearing to read 'M. Kawakami', is written over a horizontal line.

Miki Kawakami

ENGLISH TRANSLATION OF GRANTED CLAIMS OF JAPANESE PATENT

APPLICATION NO.2003-318312

5

1. A blade-pitch-angle control device used for a wind power generator having a plurality of blades, the blade-pitch-angle control device comprising:

10 a memory device in which predetermined parameters that affect the load fluctuation of the blades, azimuth angles, and pitch-angle command values are stored in association with each other;

an azimuth-angle detecting device that detects the azimuth angle of each of the blades;

15 a parameter-detecting device that detects the predetermined parameters;

a command-value receiving device that receives the pitch-angle command values for each of the blades from the memory device, the pitch-angle command values being selected on the basis of the azimuth angle of each blade detected by the azimuth-angle detecting device and the predetermined parameters detected by the parameter-detecting device; and

a pitch-angle-control command-value generating device that generates pitch-angle-control command values for individually controlling the pitch-angle of each blade on the basis of the pitch-angle command values received by the command-value receiving device and a common-pitch-angle



command value that is common to each blade, the common-pitch-angle command value being determined by output information of the wind power generator.

5 2. The blade-pitch-angle control device according to claim 1, wherein the pitch-angle command values stored in the memory device are set to values in which the wind shear characteristics at the installation location of the wind power generator are reflected.

10 3. The blade-pitch-angle control device according to one of claims 1 to 3,

wherein the predetermined parameters comprise the wind speed, and

15 the parameter-detecting device is a wind-speed estimating device that includes a characteristic table relating the wind speed and an output of the wind power generator and that estimates the wind speed by reading out a wind speed corresponding to the output of the wind power generator from  
20 the characteristic table.

4. The blade-pitch-angle control device according to one of claims 1 to 3, further comprising:

a frequency-component extraction device that extracts a  
25 frequency component corresponding to an integral multiple of the number of blades from any one of the power generation output of the wind power generator, the number of revolutions of the power generator, and the number of rotor revolutions;

and

a calculation device that calculates a pitch-angle for eliminating the load fluctuation due to the frequency fluctuation on the basis of the extracted frequency-component,

5        wherein the pitch-angle-control command-value generating device causes the pitch-angle calculated by the calculation device to be reflected in the pitch-angle-control command value.

10    5.    A wind power generator having the blade-pitch-angle control device according to one of claims 1 to 4.